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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,214	08/08/2001	Ted Moise	10003787-1	3138

7590 10/29/2003  
AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER

DICKEY, THOMAS L

ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/925,214

Applicant(s)

MOISE ET AL.

Examiner

Thomas L. Dickey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 39-41, 57-59 and 71-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39, 40, 57, 58 and 71-74 is/are rejected.
- 7) ☒ Claim(s) 41 and 59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## DETAILED ACTION

1. The amendment filed on 09/03/03 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 39,40,57,58, and 71-74 are rejected under 35 U.S.C. 102(e) as being anticipated by KIMURA et al. (2002/0192901).

With regard to claims 39,40,71, and 72, Kimura et al. discloses an integrated circuit comprising a transistor level 6 comprising one or more semiconductor devices 2-3-4-5 disposed over a substrate 1 and an overlying transistor isolation layer 8 having at least one contact via 9' extending there through; a ferroelectric device level 14, positioned over the transistor isolation layer 8, the ferroelectric device level 14 including at least one ferroelectric capacitor 19-20, and an overlying ferroelectric isolation layer 16 having at least one via (no part number, it is seen immediately to the left of the part numbered "17" in figure 1) extending there through and aligned with a corresponding contact via 9'.

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a first metal level 21, an inter-level dielectric level 22 disposed over the first metal level 21, and a second metal level 24 disposed over the inter-level dielectric level 22, the via extending through the ferroelectric isolation layer 16 being laterally sized larger than the corresponding contact via 9' aligned therewith, and throughout the ferroelectric isolation layer 16 each ferroelectric isolation layer 16 via is laterally sized larger than the corresponding contact via 9', the contact via 9's being filled with tungsten contact plugs, and the area between the ferroelectric device level 14 and the transistor isolation layer 8 being free of any interposing metal level. With regard to claims 57, 58, 73, and 74, Kimura et al. discloses method of forming an integrated circuit comprising the steps of forming a transistor level 6 comprising one or more semiconductor devices 2-3-4-5 disposed over a substrate 1 and an overlying transistor isolation layer 8 having at least one contact via 9' extending there through; forming a ferroelectric device level 14, positioned over the transistor isolation layer 8, the ferroelectric device level 14 including at least one ferroelectric capacitor 19-20, and an overlying ferroelectric isolation layer 16 having at least one via (no part number, it is seen immediately to the left of the part numbered "17" in figure 1) extending there through and aligned with a corresponding contact via 9', forming a first metal level 21, forming an inter-level dielectric level 22 disposed over the first metal level 21, and forming a second metal level 24 disposed over the inter-level dielectric level 22, the via extending through the ferroelectric isolation layer 16 being laterally sized larger than the corresponding contact via 9' aligned therewith, and throughout the ferroelectric isolation layer 16 each ferroelectric

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isolation layer 16 via is laterally sized larger than the corresponding contact via 9', the contact via 9's being filled with tungsten contact plugs, and the area between the ferroelectric device level 14 and the transistor isolation layer 8 being free of any interposing metal level. Note figures 1 and 3-16 and paragraphs 0136-0161 of Kimura et al.

### ***Response to Arguments***

3. Applicant's arguments filed 09/03/03 have been fully considered but they are not persuasive.

It is argued, at page 5 of the remarks, that "in the first embodiment of Kimura there is only one metal level 24 disposed over the ferroelectric device level (consisting of layers 19,20,21, and 22)." However, in the action mailed 6/4/03 the examiner identified part 14 as the claimed ferroelectric device level, part 21 as the claimed first metal level, and part 22 as the claimed inter-level dielectric layer. Applicant offers no evidence that the examiner misidentified these parts; for this reason applicant's conclusory statement that the ferroelectric device level consists of layers 19,20,21, and 22 cannot be responded to in a meaningful fashion.

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***Allowable Subject Matter***

4. Claims 41 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 703-308-

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0980. The examiner can normally be reached on Monday through Thursday 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

tlid  
10/2003

  
**Minhloan Tran**  
**Primary Examiner**  
**Art Unit 2826**